USGS science for a changing world

Earthquake Shaking Green Alert

GSN USAID FROM THE AMERICAN PEOPLE ANSS

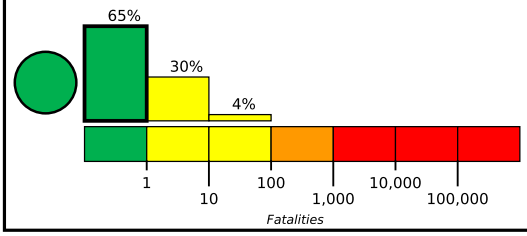
M 5.8, 66 km ENE of Aras-asan, Philippines

Origin Time: 2023-12-05 13:36:39 UTC (Tue 21:36:39 local)
Location: 9.1263° N 126.8689° E Depth: 35.0 km

PAGER Version 3

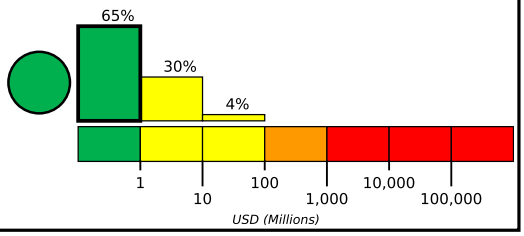
Created: 1 day, 0 hours after earthquake

Estimated Fatalities



Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

Estimated Economic Losses

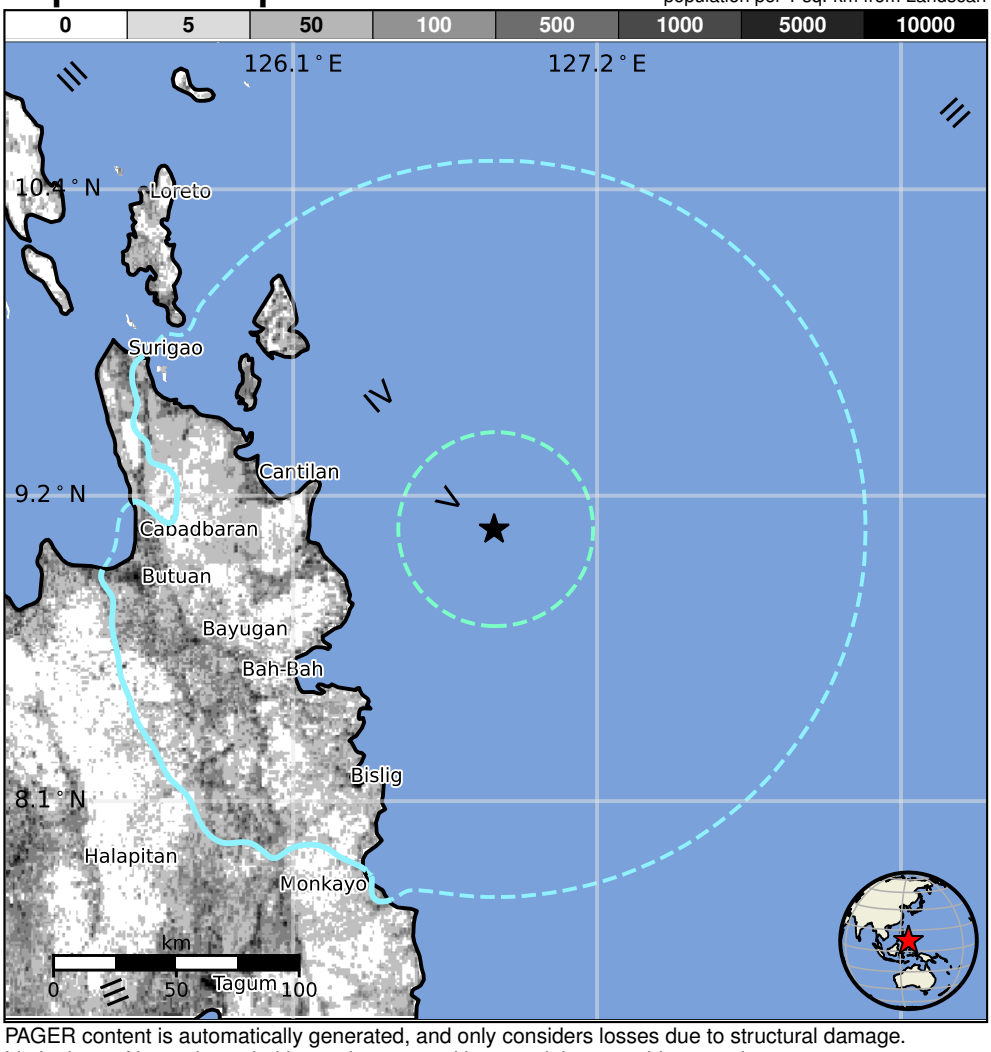


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	2,827k*	2,765k	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure



Structures

Overall, the population in this region resides in structures that are a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are unknown/miscellaneous types and heavy wood frame construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1999-12-15	352	4.8	VI(34k)	1
1987-05-23	195	5.7	VII(70k)	1
1989-12-15	86	7.5	VIII(1k)	2

Recent earthquakes in this area have caused secondary hazards such as landslides that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
IV	Bayabas	<1k
IV	Tago	6k
IV	Cagwait	<1k
IV	La Paz	2k
IV	Tandag	29k
IV	Marihatag	4k
IV	**Butuan**	**310k**
IV	Libertad	250k
III	**Surigao**	**88k**
III	Magugpo	233k
III	Valencia	84k

bold cities appear on map. (k=x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

https://earthquake.usgs.gov/earthquakes/eventpage/us7000lges#pager

Event ID: us7000lges